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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,271	12/12/2003	Jeffrey W. Willis	2066.0040005	8656

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EXAMINER

KOCZO JR, MICHAEL

ART UNIT PAPER NUMBER

3746

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/733,271	Applicant(s) WILLIS ET AL.	
	Examiner Michael Koczo, Jr.	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>05-18-2004</u> . | 6) <input type="checkbox"/> Other: ____ |

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DETAILED ACTION

Claim Objections

Claim 15 is objected to because of the following informalities: Claim 15 does not read grammatically correct. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 to 9 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 to 9 recite the "igniting" of "fuel injectors". This recitation is not understood because a fuel injector is not something which can be ignited. Did applicant intend to recite that the fuel from the injectors is ignited?

Claims 5 and 20 relate the spacing of the injectors to the degree of dispersion of the fuel. However, the degree of dispersion of the fuel is dependent on numerous operating parameters such as the type of fuel used and the temperature, which parameters are beyond the scope of the claim. It is therefore not possible to ascertain the scope of this claim which renders it as indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 to 10, 12 and 17 to 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Shekleton et al. '224. Shekleton et al. '224 discloses an annular combustor having plural axially spaced premix fuel injectors. Shekleton et al. '224 does not limit the injection of fuel through certain injectors to predetermined load ranges, and therefore it can be reasonably inferred that all of the injectors inject fuel during all load ranges, from idle to low to intermediate and then to high. It is noted that the claims are not exclusive of any operating modes, but merely require that fuel is injected during certain operating modes, which is readable on Shekleton et al. '224.

Regarding claim 2, the fuel from the injectors would inherently be ignited by the existing combusted gases.

Claims 10 to 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Maeda et al. Maeda et al. disclose a gas turbine combustor having a plurality of axially spaced premix fuel injectors which form subsets which are activated in response to power requirement (load) on the turbine.

Claims 10 to 15 are also rejected under 35 U.S.C. 102(b) as being anticipated by McWhirter et al. This reference discloses a gas turbine combustor having subsets of annular premix fuel injectors which are activated in response to turbine power requirement.

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Claims 10 to 24 are also rejected under 35 U.S.C. 102(b) as being anticipated by Maeda et al. '854. This reference discloses a cylindrical combustor having plural subsets of premix fuel injectors activated in response to turbine power requirement wherein the fuel from subsequent stages (subsets) is ignited by gases generated from combustion of preceding stages.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 to 5 and 17 to 24 are also rejected under 35 U.S.C. 103(a) as being unpatentable over Shekleton et al. '224 in view of Maeda et al. '052 (US 4,735,052). Maeda et al. '052 discloses using combusted gases to ignite the fuel from additional fuel injectors which eliminates the need for additional igniters. In view of this teaching, it would have been obvious to use combusted gases to ignite the fuel from the additional fuel injectors of Shekleton et al. '224.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry relating to the status of this application or proceeding should be directed to the Customer Service Office whose telephone number is 703-306-5648.

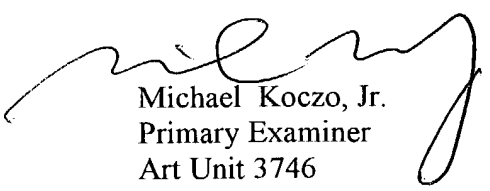
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Any inquiry relating to patent applications in general should be directed to the Patent Assistance Center at 1-800-786-9199.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Koczo, Jr. whose telephone number is 703-308-2630. The examiner can normally be reached on M-F; 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on 703-308-2675. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael Koczo, Jr.
Primary Examiner
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